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AUTHOR Shea, Mary Lou; And Others
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ABSTRACT

This learning module, which is part of a staff development program for health occupations clinical instructors, is intended to teach clinical instructors how to select evaluation instruments that are appropriate for the clinical settings in which they are teaching. It includes learning activities dealing with written examination and observational instruments and methods of critiquing and selecting them. Besides the learning activities, the module also includes directions for completing the module, an introduction, module objectives, pre- and posttests and answer keys, definitions of key terms used in the module, a module summary, and references. (MN)

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Health Occupations Clinical Teacher Education Series for Secondary and Post-Secondary Educators

Illinois State Board of Education

Adult, Vocational and Technical Education

Clinical Evaluation: The Use of Appropriate Evaluation Instruments

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HEALTH OCCUPATIONS CLINICAL
TEACHER EDUCATION SERIES
FOR SECONDARY AND
POST SECONDARY EDUCATORS

Clinical Evaluation:
The Use of Appropriate
Evaluation Instruments

Developed by:

Mary Lou Shea
Paula G. Boyum
Margaret M. Spanke

Department of Vocational
and Technical Education
College of Education
University of Illinois
at Urbana-Champaign

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Illinois State Board of Education

Walter Naumer
Chairman

Ted Sanders
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of Education

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Development Section

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CLINICAL EVALUATION:

THE USE OF APPROPRIATE EVALUATION INSTRUMENTS

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CLINICAL EVALUATION:

THE USE OF APPROPRIATE EVALUATION INSTRUMENTS

DIRECTIONS FOR COMPLETING THE MODULE

This module includes the following parts:

1) Introduction, Objectives, and Definition of Terms

2) Pre-Test and Pre-Test Answer Key

3) Learning Activities 1 through 4, and Self-Check Exercises

4) Post-Test and Post-Test Answer Key

Following review of the Introduction, take the Pre-Test and use the key to determine your score. The Pre-Test is intended to help you identify the Learning Activities on which you should place primary focus.

Then proceed to complete the Learning Activities. Even if you have had experience in selecting and critiquing evaluation instruments, completion of the Learning Activities will provide good practice and review. It is important that you complete the Self-Check following each Learning Activity.

The final part of the module, the Post-Test, is intended to measure your achievement of the objective of the module. Complete the test without using the key or the module itself (unless the directions tell you otherwise).

You may score your own test. If you miss more than 3 answers, you should review the Learning Activities within the module.

Regardless of your score, remember that critiquing and selecting appropriate evaluation instruments requires continuous practice. Practice your critiquing and selecting skills in your own clinical education program. Your program director or supervisor should be able to help you if needed.

Go on to the Introduction.

INTRODUCTION

Your students will eventually graduate and become employees in your health occupation field. It is important that they be competent workers for the protection of their patients. As a clinical instructor, you must concern yourself with the competence of your students.

To aid in assessing your students' competence, you should use evaluation instruments for documentation and standardization purposes. There are several types of instruments. They all have different formats and uses. Different types of instruments are appropriate for different types of clinical situations. It is important to critique the instruments you are using to determine if they are adequate for your use. It is also important that you select the most appropriate instrument for the different clinical situations you may encounter.

The purpose of this module is to provide you with information about evaluation instruments, as well as some sample instruments, to help you in critiquing and selecting the evaluation instruments most suitable for your clinical situations.

Many of the sample instruments presented in this module are actual instruments used in health occupations education in Illinois. We hope these instruments will be helpful to you when learning the different types of instrument formats.

Proceed to the Objectives of the Module.

OBJECTIVES OF THE MODULE

Terminal Objective: Upon completion of this module, select appropriate instruments to assess student performance, knowledge, and affect in different clinical situations.

Enabling Objectives:

1) Compare the format and usage of different written examination instruments designed to assess knowledge in the clinical setting.

2) Compare the format and usage of various types of observational instruments designed to assess performance and affect.

3) Given a sample instrument, critique the instrument for correct format and construction.

4) Given a clinical situation, select the appropriate instrument to assess the particular situation.

Go on to the Pre-Test.

PRE-TEST

Directions: Complete this test prior to beginning the Learning Activities. Utilize the Answer Key to score your own test.

Give the appropriate response to each of the following statements. Circle T if the statement is true, or F if the statement is false.

T or F 1) The true/false type of instrument format is used to assess knowledge, affect, and psychomotor skills.

T or F 2) The multiple-choice type of instrument format contains a list of "premises" and a list of "responses."

T or F 3) It is difficult to assess the higher-order cognitive levels with the short-answer format.

T or F 4) When using a checklist format for an observational evaluation, the evaluator/observer judges the quality of the student's behavior.

T or F 5) A rating scale can be either numerical, graphic, or descriptive.

T or F 6) The anecdotal record and critical incident report are intended to be supplementary evaluations.

T or F 7) Multiple-choice items should not be trick questions.

T or F 8) For standardization purposes, students should not have the option to pick the essay question they desire to answer.

T or F 9) Items of similar content should be adjacent to each other on the rating scale.

T or F 10) The anecdotal record gives students the consequences of their behavior.

Check your answers with the Pre-Test Answer Key on the next page.

PRE-TEST ANSWER KEY

1) False - The true/false type of instrument format is used only to assess knowledge.

2) False - the matching of items format contains a list of "premises" and a list of "responses." The multiple-choice item contains a "stem," "choice," and "distractors."

3) True

4) False - When performing an evaluation with a checklist, the observer simply checks the presence of the student's behavior without making judgments about the quality of the behavior.

5) True

6) True

7) True

8) True

9) False - Similar behavior items should be dispersed throughout the instrument, because observers tend to give similar ratings to items adjacent to one another.

10) False - The critical incident report gives students the consequences of their behavior.

The score you achieved should indicate how much you know or do not know about evaluation instruments in this module. Even if you scored 100%, completion of the Learning Activities will help you in your selection of appropriate evaluation instruments. It is advised that you complete the entire module.

Go on to the Definition of Terms.

DEFINITION OF TERMS USED IN THE MODULE

Affect - the feeling component of mental life as contrasted with the cognitive, or thinking, elements of mental activity. (Good, 1973)

Affective domain - the areas pertaining to the feelings or emotions. (Good 1973)

Anecdotal record - a note containing exactly what a student said or did in a concrete situation with the observer's interpretation of the behavior or action.

Assessment - the process by which as many data as possible are gathered and used to evaluate a person more accurately. (Good, 1973)

Cognitive domain - the area pertaining to the processes through which the individual obtains knowledge and conceptual understanding or explanation. Distinct from emotional processes. (Page & Thomas, 1977)

Competencies - those concepts, skills, and attitudes which are essential to a broad occupational grouping, those with common usefulness to a family of occupations. (Good, 1973)

Critical incident report - a documentation of one or a series of a student's behavior(s) or action(s), including the consequences of the behavior(s) or action(s).

Documentation - the process of citing illustrative or supporting references for statements made. (Good, 1973)

Evaluation - the process of ascertaining or judging the value or amount of something by use of a standard of appraisal; includes judgments of terms of internal evidence and external criteria. (Good, 1973)

Evaluation instrument - any of the means by which one obtains information on the progress of the learner and the effectiveness of instruction. (Good, 1973)

Measurable performable objective - a statement, in precise measurable terms, of particular behavior to be exhibited by a learner under specified conditions, including a standard of performance. (V-TECS, 1981)

Observation - the act or process of observing conditions or activities as a means of gathering descriptive or quantitative data. (Good, 1973)

Objective - impersonal, impartial, free of bias or idiosyncrasy. (Good, 1973)

Performance - a relatively short-term aspect of movement behavior, marked by movement oriented toward the execution of an identifiable task. (Good, 1973)

Psychomotor domain - the area pertaining to muscular action which follows directly from a mental process. (Good, 1973)

Simulation - in learning and training, making the practice and materials as near as possible to the situation in which the learning will be applied. (Good, 1973)

Standardization - the establishment of fixed procedures for administering and scoring an instrument. (Good, 1973)

Subjective - conditioned by the individual's temperament, biases, prejudices and partialities. (Good, 1973)

Proceed to Learning Activity #1.

LEARNING ACTIVITY #1

WRITTEN EXAMINATION INSTRUMENTS DESIGNED TO ASSESS KNOWLEDGE IN THE CLINICAL SETTING

Enabling Objective 1: Compare the format and usage of different written examination instruments designed to assess knowledge in the clinical setting.

Since a clinical competency involves both knowledge and performance, how would you know whether your students' incompetence is due to lack of knowledge or poor performance? You would need to assess these two aspects of competency separately.

The first step toward measuring the clinical competency of your students is the assessment of their knowledge of the competency. The most typical instrument used to assess knowledge is the written examination (also called paper and pencil test--discussed in the module, "Clinical Evaluation: Theory and Practice in Health Occupations").

Several advantages have been cited by Stiggins (1978) for the use of written examinations over other kinds of assessment procedures (observation, simulation, etc.) for measuring knowledge:

1) During observation assessment procedures, both knowledge and performance are assessed at the same time. For written examinations, the instructor can focus on assessing knowledge separately from performance.

2) Judgments drawn from written examinations can be more precise than those drawn from other assessment procedures.

3) The written examination can assess a larger number of items and a broader range of content in a shorter amount of time than can other assessment procedures.

There are several formats of instruments used to assess knowledge in the clinical setting. These instrument formats and their uses are as follows: (Stiggins, 1978; King, 1979)

1) True/False: The student is presented with a statement and is asked to judge whether the statement is true or false.

Examples:

T F 1) The pulmonary artery carries oxygenated blood to the heart.

T F 2) The three classifications of carbohydrates are monosaccharides, disaccharides, and polysaccharides.

Usage: The true/false format is used when it is important to have total objectivity in scoring and when the exam needs to be easy to construct. Both simple facts and more complex analyses can be assessed with the true/false format. However, true/false items tend to be ambiguous and may encourage guessing. (King, 1979)

2) Multiple-choice: This format contains a question or incomplete sentence called the "stem," followed by a series of two or more possible choices. Only one choice answer is the best response to the stem. The rest of the possible choices are called distractors.

Examples:

Oxygenated blood is carried from the lungs to the heart through the:

a) pulmonary artery
b) pulmonary vein
c) main branches
d) subclavian artery

Which of the following is a classification of carbohydrates?

a) monosaccharides
b) disaccharides
c) polysaccharides
d) all of the above

Usage: The multiple-choice format is extremely versatile in the levels of content assessed. All levels of the cognitive domain (refer to the module, "Teaching Skills in the Clinical Setting: Developing Measurable Performance Objectives") can be assessed through the multiple-choice item. (King, 1979) The scoring is totally objective. However, excellent multiple-choice items are difficult to construct.

3) Matching of items: The matching format consists of two separate lists of items. One column of items, called the "premises," is listed on one side of the page. The other side of the page has a column of "responses." The student is asked to match one or more responses with the appropriate premise.

Example:

Elements (Premises)		Definitions (Responses)	
1) ____	carbon	a)	a gray, hard, ductile metal
2) ____	hydrogen	b)	a black crystalline substance, belonging to the halogen group
3) ____	cobalt	c)	a colorless, odorless, and tasteless gas
4) ____	iodine	d)	the characteristic constituent of organic compounds

Usage: The matching format is used to assess a great amount of factual information in a short amount of time. The matching format may be difficult to construct, due to the fact that "each of the responses must be plausible alternatives for the premises." (King, 1979)

4) Short-answer (sentence completion, fill-in-the-blank, and free response): In the short-answer format, the student is asked to either complete a sentence or supply a short answer to a question.

Examples:

What are the three classifications of carbohydrates?

The vessel that carries oxygenated blood from the lungs to the heart is the _____.

Usage: The short-answer format is used primarily to assess factual information. It is difficult to assess the higher-order cognitive levels--i.e., evaluation, synthesis, analysis (refer to the module, "Teaching Skills in the Clinical Setting: Developing Measurable Performance Objectives")--with the short-answer format. (Stiggins, 1978) The short-answer format reduces the chances that the student will guess at an answer. The format is relatively easy to construct. However, scoring the items tends to be somewhat subjective, because the number of possible correct answers is increased.

5) Essay-question: The student is asked to write the answer to the question in composition form in his/her own words.

Example:

What are some implications of the implementation of the DRG (Diagnostic Related Groups) system for the medical laboratory?

Usage: The essay question is useful in assessing a variety of cognitive levels at one time. It also is effective in assessing the affective domain, because it gives the students a chance to voice their opinions about a topic. Essay questions are relatively easy to construct, but they are difficult to score. The scoring of essay questions tends to be extremely difficult.

Although written examinations are primarily used in the classroom to assess knowledge of subject matter, you may use written examinations to assess your students' knowledge about the procedures, policies, and examinations done at your particular clinical site. When written examinations are not appropriate, you may use oral examinations. The true/false, multiple-cnoice, short-answer, and essay question formats are also suitable for oral questioning.

Summary

Since knowledge cannot be assessed solely through observation at the clinical site, your students' knowledge must be assessed through the use of written (or oral) examinations. Several instrument formats are used for this purpose. They are: 1) true/false, 2) multiple-choice, 3) matching of items, 4) short-answer, and 5) essay question.

Proceed to the Self-Check Exercise for Learning Activity #1.

SELF-CHECK FOR LEARNING ACTIVITY #1

Multiple-Choice: Circle the letter of the best response to the question.

1. Which of the following formats contain a stem, one correct response, and one or more distractors?

    a) True/False
    b) Matching
    c) Multiple-choice
    d) Essay question

2. Which of the following formats of instruments gives the students the opportunity to express their own opinion on a topic?

    a) True/False
    b) Short answer
    c) Multiple-choice
    d) Essay question

3. The format that is used to assess a great amount of factual information in a short amount of time is

    a) Short answer
    b) Essay question
    c) Matching
    d) True/False

4. In scoring the item, which format tends to yield the most subjective assessment?

    a) Multiple-choice
    b) Essay question
    c) True/False
    d) Short answer

5. Which type of format encourages guessing the most?

    a) True/False
    b) Essay question
    c) Short answer
    d) Multiple-choice

Check your answers with the Self-Check Answer Key!

SELF-CHECK ANSWER KEY

1. C
2. D
3. C
4. B
5. A

If you feel that you can compare the format and usage of the different written examination instruments, proceed to Learning Activity #2.

LEARNING ACTIVITY #2

OBSERVATIONAL INSTRUMENTS

Enabling Objective 2: Compare the format and usage of various types of observational instruments designed to assess performance and affect.

The most frequent type of evaluation procedure used in the clinical setting is the observational assessment. (See the module, "Clinical Evaluation: Theory and Practice in Health Occupations.") You can use observational techniques to assess such behaviors as: performance of skills, work habits, attitudes, and applications of knowledge.

DeMers (1978) cites several advantages and disadvantages of the observational assessment. The advantages are:

- comparative ease of administration
- variety of possible applications in the clinical setting
- comparative ease of instrument development
- ability to evaluate learning that cannot be assessed through written examination

The main disadvantage is:

- assessment is not always reliable, because the evaluation of the observation may be too subjective

Other advantages or disadvantages depend on the specific type of observational instrument you intend to use.

Unlike the written examination, you or your student (with your validation) may fill out the observational instrument. You may use the instrument to assess your students' behavior, and your students may use it to assess their own behavior. After your assessments are completed, you should review and discuss them on an individual basis.

The items within the instrument guide the observation process. The assessment may involve either recording the actual behavior, assigning a numerical score to the behavior, or giving the behavior a standard verbal descriptor (such as satisfactory or unsatisfactory).

There are several types of observational assessment instruments you can use. Each type has its own format and specific use. (DeMers, 1978; Fivars & Gosnell, 1966) They are as follows: 1) checklist, 2) rating scale, 3) anecdotal records, and 4) critical incident report.

Checklist

This format consists of a list of behaviors related to some type of performance, with space provided to check the presence or absence of the behavior within the student's performance. The checklist may or may not include a space for comments.

Examples:

Example A: The following checklist (see next page) is part of an evaluation form used by the Practical Nursing Program at Lakeland College, Mattoon, IL:

PRECLINICAL ORIENTATION I

MODULE #2 - LAB SHEET FOR STERILIZATION AND DISINFECTION

OBJECTIVE: In the sterilization room, and given a selection of different types of instruments, sterilization/disinfection equipment, and armamentarium, the student will demonstrate his/her ability to select and operate the recommended methods of sterilization/disinfection equipment according to the lecture material and laboratory sheets on a pass/fail grading system.

NAME OF STUDENT _____ PASS ____
FAIL ____

INSTRUCTOR _____

DID THE STUDENT PERFORM THE FOLLOWING:

	I. Preparation of instruments
	Hand-scrubbing
	1. Scrub instruments with a brush, soap and water, rinse and pat dry, before placing in the appropriate sterilizer/disinfectant.
	Ultrasonic cleaner
	1. Place instruments in appropriate container of solution, time, rinse, and pat dry instruments before placing in recommended sterilizer/ disinfectant.
	II. Autoclave
	1. State orally the types of items, times, pressure and temperatures to accomplish sterilization.
	2. Select correct wrap for instruments.
	3. Check the power source.
	4. Check water level in reservoir. Added distilled water if needed.
	5. Correctly operate the autoclave door.
	6. Turn correct knob counter-clockwise to FILL position to bring water to the chamber.
	7. Turn knob counter-clockwise to STERILIZE position.
	8. Place instruments loosely on shelves to allow circulation of steam.
	9. Close door and allow autoclave to preheat.
	10. Watch temperature and pressure gauges.
	11. Correctly set temperature and pressure knob for operation.
	12. Set timer for size of load to accomplish sterilization.
	13. Turn correct knob to VENT when timer bell rings.
	14. Allow time for pressure gauge to return to zero before opening door.
	15. Observe safety rules and procedures to prevent burning of arms and face when opening autoclave door.
	16. Allow instruments to dry before removing with transfer forceps.

Example B: The following checklist is part of an evaluation form used by the Dental Assisting Program at Parkland College, Champaign, IL:

BLOOD PRESSURE EVALUATION

Patient Education:

_____ Explains why blood pressure is measured in the Parkland Dental Hygiene Clinic by stating that we are screening for hypertension, which usually has no symptoms.

_____ Explains how dental treatment may need to be altered if a patient has a reading above our standards or below our standards.

Note 1: The student can state that the patient is not placed too far back in dental chair if the reading is below our criteria, or the patient is not treated if the reading is above our criteria.

Note 2: Our diastolic standard of 90 mm. may be told to the patient if the patient inquires about our standards.

_____ Defines blood pressure as the force of blood against arterial walls.

_____ Defines hypertension as sustained high blood pressure.

_____ Describes some major problems that may result from hypertension including heart attacks, strokes, and kidney dysfunction.

_____ Explains the procedure and purpose of determining the maximum inflation level (MIL) by stating that the radial pulse will be felt momentarily, and that this procedure helps to determine how far the blood pressure cuff should be inflated.

*_____ Tells patient the numerical blood pressure reading when asked, but does not refer to the readings as "high" or "low." (Note: Student may state that patient meets our standards for proceeding with treatment.)

Equipment Preparation:

*_____ Indicates to instructor necessity of disinfecting earpieces of stethoscope before use. (Does not need to disinfect earpieces for instructor.)

_____ Selects proper cuff size. (Cuff should cover 2/3 of patient's upper arm).

* Note: A no response at this point receives an automatic failure for the procedure.

Positioning of Patient:

_____ Instructs patients to sit with legs uncrossed, when necessary.

_____ Asks patient to remove watch so that MIL and blood pressure can be determined without interference, when necessary.

_____ Places arm in slightly flexed position.

_____ Turns palm of left hand upward.

_____ Supports whole forearm at heart level on a smooth, flat surface. (Dental chair may be tilted back to accomplish this.)

Example C: The following checklist is part of an evaluation form used by the Practical Nursing Program at the Rockford Area Vocational Center, Rockford, IL:

APPEARANCE	DATE					COMMENTS
	___	___	___	___	___	
A. Complete Uniform						
B. Hair: neat, not touching collar						
C. Nails: clean, short, no nail polish						
D. Snoes (clean)						
E. Jewelry: only what is allowed						

Checklist Usage:

"Checklists are frequently used to evaluate skills, product outcomes, activities, interests, and personal characteristics." (DeMers, 1978) The checklist is useful in presenting to the students the expected activities and outcomes of a performance before they are evaluated. After their performance is evaluated with the checklist, students can clearly see their performance deficiencies.

When used properly, the checklist could prove to be the least subjective type of evaluation format. When performing an evaluation with a checklist, the observer simply checks the presence of the student's behavior without making judgments about the behavior. However, if the observer completes the checklist carelessly, without any thought, the assessment is of little value. Checklists may be completed by the clinical instructor or the student (with validation from the instructor).

Rating Scale

Similar to the checklist, the rating scale consists of a list of behaviors of some type of performance. In addition, it contains a scale associated with each behavior, indicating the degree at which the behavior is performed by the student. The scale may have different forms: numerical, graphic, or descriptive. The primary difference between the rating scale and the checklist is that the rating scale allows the observer to make judgments about the behavior observed, instead of only noting the presence of the behavior.

Examples:

Example A: The following example is part of a numerical rating scale submitted by the Norridge Nursing Center (a training station for the Oak Park and River Forest High School Cooperative Education program in Illinois):

OAK PARK AND RIVER FOREST HIGH SCHOOL
District 200

THE COOPERATIVE EDUCATION PROGRAM
JOB PROGRESS REPORT

Training Station Norridge Nursing Center

	Unsatisfactory	Satisfactory	Outstanding	Comments
Attitude toward work	1 2 3	4 5 6	7 8 9	
Quality of work	1 2 3	4 5 6	7 8 9	
Ability to follow directions	1 2 3	4 5 6	7 8 9	
Ability to work steadily	1 2 3	4 5 6	7 8 9	
Ability to accept criticism	1 2 3	4 5 6	7 8 9	

Example B : The following example is part of a graphic rating scale used by the McKinley Hospital and Health Center, located at the University of Illinois in Champaign-Urbana, IL:

EMPLOYEE EVALUATION FORM

Name _____ Supervisor _____

Department _____ Job Title _____

Please mark an "X" on each continuum at the point which best describes the employee's performance:

QUALITY OF WORK

4----------3----------2----------1
Outstanding — Unsatisfactory, Careless

Comments:

QUANTITY OF WORK

4----------3----------2----------1
Unsatisfactory — Outstanding, eager to do more than assigned

Comments:

ATTENDANCE

4----------3----------2----------1
Rarely Absent — Poor Attendance

Comments:

ATTITUDE

4----------3----------2----------1

Always willing, highly cooperative and pleasant

Uncooperative, troublesome or indifferent

Comments:

INITIATIVE

4----------3----------2----------1

Exceptionally diligent, seeks opportunities

Puts forth no effort

Comments:

PERSONAL APPEARANCE

4----------3----------2----------1

Always untidy, improper dress

Very neat, extremely well-groomed, proper dress

Comments:

Example C: The following example is part of a descriptive scale that is used by the Medical Laboratory Technology program at Triton College, River Grove, IL:

STUDENT EVALUATION FORM

Student: _____ Hospital: _____

Department: _____ From: _____ To: _____

	EVALUATION:
Item 1: QUALITY OF WORK: Consider neatness, precision and accuracy regardless of volume. Disregard the isolated error. 0- 6 Inferior work has to be repeated. Reports inaccurate. 7 Usually accurate and thorough. 8 Dependable. Rarely find error. 9-10 Rapid worker. Does more than expected.	
Item 2: QUANTITY OF WORK: Consider volume of work produced under normal conditions. 0- 6 Very slow. Often does not turn out work on time. 7 Produces only enough to get by. 8 Produces good volume. 9-10 Rapid worker. Does more than expected.	
Item 3: JOB KNOWLEDGE AND VERSATILITY. Consider knowledge of basic principles and techniques and ability to transfer this knowledge to lab materials, instruments, and methods for this rotation. 0- 6 Very little knowledge of department. Is completely stalled when anything unusual comes up. 7 Learned only the routine procedures. Lacks knowledge and solves few problems for him/herself. 8 Has good working knowledge of basic principles and is able to solve many of own problems. 9-10 Thorough grasp of department; is able to work out his/her own problems.	

Example D: This example is part of another type of descriptive scale that is used by the Dental Assisting program at Parkland College in Champaign, IL:

PARKLAND COLLEGE, DENTAL ASSISTING:
EVALUATION OF CLINICAL PRACTICE

NAME: _____

DATE OF SERVICE: _____ TO: _____

DOCTOR: _____

ABILITY TO:	1	2	3	4
1. Perform chairside functions effectively and efficiently; degree of manual dexterity.	No dexterity. No ability or chairside assisting.	Good dexterity, shows continual improvement in chairside assisting.	Demonstrates good ability at chairside, works with efficiency & little aid.	Excellent chairside assistant, needs no direction or aid during normal procedures.
2. Knowledge of instruments, equipment, and supplies.	Demonstrates little knowledge of equipment, instruments, & materials, & their use.	Usually recognizes equipment, materials, and adapting to your office use.	Recognizes instruments, equipment and supplies; rarely needs help in adapting to your office use.	Always recognizes equipment and supplies, & adapts them to your office use.
3. Care of instruments, equipment, and supplies; sterilization technique.	Careless with instruments, equipment, and supplies. Poor sterilization technique.	Usually careful with instruments equipment, and supplies, needs direction in your office sterilization routine.	Careful with instruments, supplies, rarely needs direction in your office sterilization routine.	Always careful, needs no direction in sterilization technique.
4. Assisting technique during moisture control procedure.	Demonstrates little knowledge of moisture control technique.	Demonstrates continual improvement in technique, still requires direction from operator.	Usually keeps operating field clear, seldom obstructs operator's view or injures oral tissues.	Always keeps operating field clear, never obstructs operator's view or injures oral tissues.

Rating Scale Usage:

The rating scale is used "to evaluate skills, product outcomes, activities, interests and personal characteristics." (DeMers, 1978) The rating scale is useful in providing clear feedback to the student, because it allows the observer to assess the quality of the behavior instead of merely reporting the presence or absence of the behavior.

Each type of rating scale is used differently. For the numerical rating scale, the observer circles the number that indicates the degree to which the behavior is performed. When using the graphic scale, the observer rates the behavior along a continuum, instead of just a single numerical score. The observer utilizes descriptive phrases to make an assessment with the descriptive rating scale.

Although the rating scale is useful in providing more explicit feedback than the checklist, it is subject to more misuse. Because the observer must make judgments on the quality of the behavior, the rating scale is more apt to render a more subjective assessment. Therefore, the observer must carefully assess the student on only those behaviors that he/she can observe.

Like the checklist, the rating scale can be completed by the clinical instructor or the student (with validation from the instructor).

Anecdotal Record

The anecdotal record is a note, made by the observer, on a student's action or behavior. Several notes are typically compiled on separate note cards for each noted action or behavior. The note card contains the student's name, the date of the observation, a description of the setting, the action or behavior observed, the observer's interpretation of the action or behavior, the evaluator's name, the student's signature and comments, and the evaluator's signature.

Example: The following example is a completed anecdotal record form:

Directions: Record the facts of the situation clearly and concisely without reflecting any biases.

Student's Name: Sarah Smith (dietary aid)

Date of Observation: 00/00/00

Evaluator/Observer: Mark Meyer (clinical instructor)

Setting (place, persons involved, atmosphere, etc.):

At 9:00 a.m., Sarah was collecting empty trays from the orthopedic floor. The floor was very busy after breakfast had been served. Sarah's fellow students came to her and informed her that they were going to the cafeteria for their break. The group of students walked toward the elevator.

Student Action or Behavior:

Sarah hurriedly loaded her cart with empty trays. She proceeded to run down the hall with her cart, after her fellow students, yelling, "Wait for me, I want a break, too!"

Evaluator/Observer Interpretation:

Sarah displayed very unprofessional behavior. She disrupted the rest of many of the patients on the orthopedic floor, and she could have caused an accident with her cart.

_____ _____

Student's signature Evaluator's signature

Student's Comments: _____

_____

_____

Anecdotal Record Usage:

The anecdotal record is used to provide the students with feedback on their affective behavior (whether good or bad). It does not mix the facts with the interpretations of the behavior within the report (as does the rating scale assessment). It reports the whole picture of the behavior or action as it was displayed and then gives the importance of why it must be reported. It is an explicit evaluation; however, the anecdotal record tends to be extremely subjective. Therefore, it is used as a supplement to the more structured, more objective checklist or rating scale assessment instruments.

Complete the anecdotal record yourself. Record the behavior as soon as it occurs. Then make an appointment to meet with the student (privately) as soon as possible. At the start of the meeting, explain to the student the purpose of the meeting. You may take several approaches to discussing the student's behavior. You may simply present the student with the anecdotal record and have him/her comment on the behavior verbally and in writing, and then discuss the behavior openly. On the other hand, you may first ask the student for his/her interpretation of the behavior and hold a discussion about the behavior before presenting the student with the anecdotal record. Regardless of the type of approach you use, you must make sure that the discussion does not become an argument.

If the behavior is unsatisfactory, maintain a calm atmosphere and demeanor during the discussion so that the student does not feel threatened. You may reassure the student that this type of evaluation is formative and that it is used to help him/her improve throughout the semester. However, also let the

student know that if the behavior continues, it will be reported on his/her final evaluation.

Most importantly, have the student sign the completed anecdotal record form. If any type of action must be taken for or against the student, the anecdotal record would not be considered a valid document if it is not signed by both you and the student.

Critical Incident Report

The critical incident report is quite similar to the anecdotal record, because it is a recording of actual behaviors or actions of students. However, the critical incident report is a record of one or a series of behaviors and actions without any interpretations by the observer.

The content included in a critical incident report includes: "the Antecedents to the behavior, the Behavior itself, and the Consequences of the behavior." (DeMers, 1978) This is known as the "ABC rule" (DeMers, 1978) for writing critical incident reports.

Example: The following example is a completed critical incident report form:

Directions: Record each entry clearly and concisely without reflecting any biases.

Student's Name: William Walsh (nursing student)

Evaluator/Observer: Laura Lowry (clinical instructor)

Date	Antecedents	Behaviors	Consequences
9/5 - at 1:30 p.m.	William was taking a patient for her walk down the hall. Afternoon break is usually taken at 1:30 p.m.	William asked the patient to walk back to her room by herself so he could take his break on time.	If behavior such as this continues to occur, it will be written on his permanent evaluation. W.W. L.L.
9/20 - at 4:00 p.m.	A patient asked William to help him to the washroom. The students usually leave for home at 4:00 p.m.	William told the patient he would be back to help him, but then proceeded to leave for home.	This behavior will be recorded on William's permanent evaluation. If the behavior continues, his mid-term grade will be lowered.

Student's Signature: _____

Evaluator's Signature: _____

Critical Incident Report Usage:

The critical incident report is used for formative evaluation regarding a series of related student affective behaviors or actions. It may also be used to resolve behavior problems and to reward positive behaviors. Like the anecdotal record, it is best used as a supplement to more structured assessment instruments. It is used instead of the anecdotal record when a series of behaviors occur, when less subjective notes are preferred, and when a written course of corrective action or positive reinforcement for the behavior is needed.

The critical incident report, like the anecdotal record, is completed by you, the clinical instructor. You should follow the suggestions written under the anecdotal record (see page 18) for holding meetings with students. Make sure you meet with the student after you make each entry. When discussing the critical incident report with the student, it is important to stress the consequences of his/her actions. Make certain he/she understands all that is written in the report. Have the student sign the form. If there is more than one entry on the form, have the student initial each entry, and have him/her write comments under each entry if he/she so desires.

SUMMARY

The assessment of performance and affect are essential in clinical evaluation. The instruments which are used to aid in your observational assessment are: 1) checklist, 2) rating scale, 3) anecdotal record, and 4) critical incident report.

Proceed to the Learning Activity #2 Self-Check.

SELF-CHECK FOR LEARNING ACTIVITY #2

Multiple-Choice: Circle the letter of the best response to the question.

1. On which of the following instrument formats does the observer merely report whether a behavior is present or absent?

    a) Anecdotal record
    b) Rating Scale
    c) Checklist
    d) Critical incident report

2. Which of the following rating scales utilizes definitive phrases at each point on the scale to give a more precise judgment of behavior quality?

    a) Numerical
    b) Descriptive
    c) Graphic
    d) Both a and c

3. The Critical Incident Report contains which of the following comments?

    a) Setting, behavior, and interpretation
    b) Antecedents, behavior, and consequences
    c) Anecdotes, behavior, and comments
    d) Critical incident and comments

4. Which of the following formats is used when a written course of corrective action for a student's behavior is needed?

    a) Checklist
    b) Anecdotal record
    c) Rating scale
    d) Critical incident report

5. Which of the following formats tends to yield the most objective evaluation?

    a) Checklist
    b) Anecdotal record
    c) Critical incident report
    d) Rating scale

Check Your Answers!

SELF-CHECK ANSWER KEY

1. c
2. b
3. b
4. d
5. a

If you feel that you can compare the format and usage of the different observational instruments, proceed to Learning Activity #3.

LEARNING ACTIVITY #3

CRITIQUE OF INSTRUMENTS

Enabling Objective 3: Given a sample instrument, critique the instrument on correct format and construction.

The success of an evaluation depends largely upon the quality of the assessment instrument and the way in which the instrument is used. If the items are not written correctly or clearly, the instrument will be misleading and, consequently, be of little value. If the judgments made by the observer/evaluator are based on personal biases instead of student performance, the evaluation is false and is of no real use.

RULES AND GUIDELINES FOR CRITIQUING INSTRUMENTS

In order to determine whether the evaluation instruments you are using are correctly written and appropriately used, you can critique your instrument, utilizing the following rules and guidelines written by experts in clinical evaluation. These rules and guidelines are separated into three general categories: 1) instruments in general, 2) written examination instruments, and 3) observational instruments. These categories are further separated into the specific types of formats.

I. Some general rules and guidelines for all instruments are as follows:

- Directions written for the entire instrument and for each type of format must be clear and concise.
- The instrument should evaluate a variety of tasks or objectives and not be weighted on only a few.
- Items within the instrument must relate to an observable, measurable performance objective for the clinical education course. (See the module, "Teaching Skills in the Clinical Setting: Developing Measurable Performance Objectives.")
- Items should not be too lengthy and/or wordy.
- Items should be independent of other items.
- The instrument must include space for the student's name and the date of the evaluation.
- A descriptive title should be included.

II. Rules and guidelines for written examination instruments used to assess knowledge are as follows:

A. True/False (Stiggins, 1978):

- Each item should be definitely true or false.
- False items should be believable.
- Negative statements should be avoided.
- Specific determiners such as: never, all, only, always, generally and often, should be avoided.
- Sentences directly from the text should not be stated as test items.
- Items should focus upon one particular idea or problem.

B. Multiple-Choice (Fivars & Gosnell, 1966; King, 1979; Stiggins, 1978):

- Trick items should be avoided; they will only confuse students.
- Negative instruments for multiple-choice items should be avoided.
- The stem should be able to stand alone. In other words, the student should not have to read all of the choices in order to understand the question.
- The stem should never imply that the choices are factual if they are not.
- The choices should all use the same frame of reference.
- The choices should all be plausible responses to the stem.
- "None of the above" should not be used unless there is only one response to the stem.
- At least 3 choices, but no more than 5 choices, should be used.
- All choices should be brief.
- Choices within an item should be relatively the same length.
- Wrong choices (distractors) should not be too obvious, but should clearly be wrong responses to the stem.

C. Matching (King, 1979):

- Each list of premises and responses should be as homogenous as possible.

- Directions should specify whether the responses can be used more than once or only once.

- Responses should be short.

D. Short Answer (King, 1979; Stiggins, 1978):

- Items should only have one clear, short answer.

- Items should not be taken from text verbatim.

- The blank for a fill-in-the-blank item should be placed near the end of the statement.

E. Essay (Stiggins, 1978):

- The question must be clear, precise, and explicit.

- The question should give the student some direction in answering the question, by stating the key elements that should be covered in the response.

- For standardization purposes, all students should answer the same question. Optional questions should be avoided.

- When scoring essay questions:

  a) the identity of the student should be concealed.

  b) an ideal answer should be constructed, in order to set an example for scoring.

  c) each item should be scored one at a time.

  d) more than one person may score the questions to reduce the chance of personal bias.

III. Rules and guidelines for observational instruments are as follows:

A. All types of observational instruments should include:

- Explicit instructions to the observer/evaluator on how the instrument should be completed.

- the student's name and signature.

- the observer's/evaluator's name and signature.

- the date of the observation.

- the institution where the observation took place.

B. Checklist (DeMers, 1978):

- Items must consist of observable and measurable behaviors.

- Each item should be short and focused on one behavior.

- A space should be provided for comments, to let the observer explain why items may have been omitted or unchecked.

- Items should include behaviors important only to the performance or task and should exclude redundant or trivial behaviors.

- Items should be organized in a logical order, according to the sequence of performance.

C. Rating Scale (DeMers, 1978):

- Explicit instructions for completing the assessment must be included.

- Similar behavior items should be dispersed throughout the instrument, because observers tend to give similar ratings to items adjacent to one another.

- Descriptive phrases at each point on the rating scale should have great differences in meaning between them, and they should be as specific as possible.

- Descriptors such as "satisfactory," "very good," and "frequently" must be defined for the observer in the directions section, or in each item.

- When using the rating scale, obey these rules:

  a) Put all biases aside.
  b) Give discriminating ratings rather than "middle-of-the-road" (average) ratings.
  c) Rate each item individually and independently.
  d) Use the objectives of the course as a reference for rating--not your own performance of the task.

D. Anecdotal record (DeMers, 1978):

- When completing the anecdotal record, obey these rules:

a) Make notes that reflect the course objectives.
b) Put all biases aside.
c) Record notes as soon as the behavior or action occurs.
d) Make sure that the description of the behavior and the interpretation of the behavior are separate.
e) Date the record.
f) Make sure both you and the student sign the record.
g) Make sure you have the student make a written comment.
h) Do not include the consequence of the behavior.

E. Critical Incident Report (Fivars & Gosnell, 1966; DeMers, 1978):

- When completing the critical incident report, obey these rules:

a) Date the report.
b) Put all biases aside.
c) Include only the facts of the observed performance.
d) Record the notes in a systematic manner, so the information can be used to interpret trends in behavior.
e) The antecedents and behaviors must be defined and reported in detail.
f) The consequences should be written within reason, and should be backed by the reported behaviors.
g) Make sure both you and the student sign the report.
h) Make sure you have the student make a written comment.

CRITIQUING THE INSTRUMENT

When critiquing an instrument, you must follow these steps: 1) Identify the type of format being used (refer to Learning Activities #1 and #2 in this module). 2) Check the instrument on each rule and guideline under the identified type of format. The following are examples of instruments and the critiques of the instruments. These examples are offered to demonstrate the process used for critiquing an instrument.

Example 1

Objectives for the unit:

Given a written examination, the student will:

1) Name the four chambers of the heart
2) Identify the location of the great vessels of the heart
3) Identify the location of the four valves of the heart

Assessment Instrument:

Name: _____ Date: _____

Quiz #1 - Heart Anatomy

1) The heart has a:

   a) right ventricle
   b) left ventricle
   c) right atrium
   d) left atrium
   e) all of the above

2) Which of the following heart valves is located between the right atrium and the right ventricle?

   a) tricuspid
   b) intra chamber

3) Which of the following is the membrane that covers the heart?

   a) pericardium
   b) pleural membrane
   c) La mem-brain
   d) None of the above

4) The aorta -

   a) commences with the upper part of the left ventricle, ascends for a short distance, arches over the left side of the heart, and then descends on the left side of the vertebral column
   b) is located between the lungs and the right ventricle
   c) is located on the right side of the heart
   d) is the largest of the great vessels of the heart

Critique of the Instrument:

Step 1: Identify the format of the instrument.

This instrument has a multiple-choice format, because each item contains a stem and a list of several choices for the response.

Step 2:

Check the instrument on each of the rules and guidelines for instruments in general and for written multiple-choice examination instruments.

Under general rules and guidelines, the instrument:

- does not include any directions for completion of the examination.
- includes an item that does not relate to the objectives for the unit (question #3).
- includes an item which is quite lengthy and wordy (question #4).

Under multiple-choice rules and guidelines, the instrument:

- includes two items in which the stem cannot stand alone (questions 1 & 4).
- has an item stem that implies that a choice ("intra-chamber") is factual, when it is not (question #2).
- has an item that includes a choice that is of a different frame of reference than the other choices (question #4, choice d).
- has an item that contains less than 3 choices (question #2).
- has an item that contains a lengthy choice (question #4, choice a).
- contains an item that has an obviously wrong choice (question #3, choice c).
- has an item stem that cannot stand alone (question #4).

("None of the above" choice for question #3 is a plausible response, because there is only one response to the stem.)

Example 2

Objectives for Displaying Initiative:

While working at the clinical site, the student will:

1) demonstrate constructive use of his/her time.

2) seek new activities when assigned tasks are completed.

3) display evidence of performing self-directed learning.

Assessment Instrument:

Student's Name: Larry Locwell (nursing aid student)

Date of Observation: _____

Evaluator/Observer: Heidi Hillworth (clinical instructor)

Setting (place, persons involved, atmosphere, etc.):

Larry Locwell was assigned to the medical-surgical floor to help the nurses with their duties. There were not many patients on the floor and it was very quiet. Larry finished the work assigned to him and had nothing more to do.

Student Action or Behavior:

Larry, being a resourceful student, took advantage of the spare time he had acquired and wrote plans for forming a journal/book club with the rest of the students. He showed much initiative by seeking new activities for students in the nursing aid program.

Evaluator/Observer Interpretation:

Larry will be rewarded for his actions.

Critique of the Instrument:

Step 1: Identify the format of the instrument.

This instrument has an anecdotal record format. It is being used to evaluate affective behavior. The form asks merely for the setting, student behavior, and the evaluator's interpretation of the behavior, and not the consequences of the behavior. Consequently, it is an anecdotal record.

Step 2: Check the instrument on each of the rules and guidelines for instruments in general and for the observational anecdotal record instrument.

Under general rules and guidelines, the instrument:

- does not include any directions for completion of the instrument.
- does not include the date of the evaluation.
- does not include a title.

Under anecdotal record rules and guidelines, the instrument:

- has the interpretation of the behavior included in the description of the behavior.
- does not include the date of the evaluation.
- does not include a space for the signatures of the student and clinical instructor.
- does not include a space for the written comments of the student.
- includes the consequences of the behavior under the interpretation of the behavior. This should not be included in the record.

  Note: Positive affective behavior should also be reported in anecdotal records. Anecdotal records should be utilized for positive as well as negative affective behavior.

Try your hand at critiquing an instrument! Go on to the Self-Check for Learning Activity #3.

SELF-CHECK FOR LEARNING ACTIVITY #3

Directions: For the following assessment instrument sample, give a critique on the format and construction. You may use the rules and guidelines listed in the Learning Activity.

Objectives for Professional Behavior:

While working at the clinical site, the student will:

1) display a professional appearance every day throughout the semester.

2) obey the rules and regulations set by the institution regarding attendance.

3) demonstrate professional verbal and written communication skills.

4) feel motivated to learn and work.

Assessment Instrument:

Name: _____ Date: _____

Institution: _____

Evaluator's Name: _____

Directions: For each of the following behaviors, rate the student on his/her performance at the clinical site. Utilize the descriptions stated under each rating point to make your judgment. Carefully consider each point on the scale before making your final decision.

Professionalism:

I. Displays a professional appearance every day throughout the semester.

Rating

1 - Student displays a very unprofessional appearance. Student always appears untidy, unclean or out of uniform.

2 - Student displays a fairly unprofessional appearance. Student frequently appears untidy, unclean or out of uniform.

3 - Student displays a fairly professional appearance. Student sometimes appears somewhat untidy, unclean or out of uniform.

4 - Student displays a very professional appearance. Student never appears untidy, unclean, or out of uniform.

II. Obeys the rules and regulations set by the institution regarding attendance.

Rating

1 - Student's attendance is bad
2 - Student's attendance is not good
3 - Student's attendance is good
4 - Student's attendance is excellent

III. Demonstrates professional verbal communication skills.

Rating

1 - Student never demonstrates professional verbal communication skills. Student never verbally communicates clearly, correctly or tactfully.

2 - Student rarely demonstrates professional verbal communication skills. Student rarely communicates clearly, correctly or tactfully.

3 - Student usually demonstrates professional verbal communication skills. Student usually verbally communicates clearly, correctly and tactfully.

4 - Student always demonstrates professional verbal communication skills. Student always verbally communicates clearly, correctly and tactfully.

IV. Demonstrated professional written communication skills.

Rating

1 - Student never demonstrates professional written communication skills. Student's writing is never legible, neat or grammatically correct.

2 - Student rarely demonstrates professional written communication skills. Student's writing is rarely legible, neat or grammatically correct.

3 - Student usually demonstrates professional written communication skills. Student's writing is usually legible, neat and grammatically correct.

4 - Student always demonstrates professional written communication skills. Student's writing is always legible, neat and grammatically correct.

V. Feels motivated to learn and work.

Rating

1 - Student never feels motivated to learn or work.

2 - Student rarely feels motivated to learn or work.

3 - Student often feels motivated to learn and work.

4 - Student always feels motivated to learn and work.

TOTAL RATING

_____

Critique of the Instrument:

Step #1: Identify the format of the instrument.

Step #2: Check the instrument on each of the rules and guidelines for instruments in general, and for the specific format of this particular instrument.

When you are finished, check your answers with the Answer Key.

SELF-CHECK ANSWER KEY

Critique of the Instrument:

Step #1:

The instrument is an observational assessment instrument. More specifically, it is a descriptive rating scale.

Step #2:

Under general rules and guidelines, the instrument:

- does not include a descriptive title.
- includes an item which relates to an objective that is not observable and measurable (Item V).

Under the rules and guidelines for all observational instruments, the instrument:

- does not include a space for the student's and observer's signatures.

Under the rules and guidelines for rating scales, the instrument:

- includes two items (Items III & IV) which are similar behavior items adjacent to each other.

- includes an item (Item II) that has descriptive phrases which are not specific or distinctive enough to provide an accurate rating.

- includes descriptors which are not defined (always, frequently, sometimes, never, rarely, bad, not good, good, excellent, and usually).

If you feel you can critique the format and construction of various instruments, go on to Learning Activity #4!

LEARNING ACTIVITY #4

SELECTING INSTRUMENTS FOR CLINICAL ASSESSMENT

Enabling Objective 4: Given a clinical situation, select the appropriate instrument to assess the particular situation.

How do you know which type of instrument is appropriate to use? As a clinical instructor, you are faced with this question every day. After studying the different types of instruments in Learning Activities #1 and #2 in this module, you discovered that different types of instruments are used to assess different types of clinical situations. But, it may be difficult for you to decide which type is the most appropriate for a given clinical situation. In order to make this decision, you must carefully evaluate the usage of the different types of instruments.

Important: Turn back to Learning Activities #1 and #2 and re-examine the usage of each type and format of assessment instrument before going on!

Now that you have carefully examined the uses of the different types of instruments, you have the background information needed to select the appropriate instruments for different clinical situations. Use the information to determine the appropriate instruments for the following clinical situations:

Clinical Situation #1:

Sarah, a nurse and clinical educator at a nursing home, demonstrated to her student nurse assistants how to bathe bedridden patients at the beginning of the semester. According to the course objectives, her students are to demonstrate competence in bathing bedridden patients by the end of the semester. Furthermore, her affiliate high school requires that her students be evaluated on specific standards of performance.

Sarah's students have had numerous opportunities to practice bathing bedridden patients. She asked her students if they felt competent enough in the task to be evaluated on it. Her students agreed to the evaluation procedure.

Sarah must now decide on the appropriate evaluation instrument to test the specific competence demonstrated by her students on bathing bedridden patients. Which instrument should she use?

Answer:

Sarah is evaluating a performance skill, so an observation instrument would be appropriate. Since Sarah must evaluate her students at a specific standard of performance, a rating scale format would be most appropriate.

Clinical Situation 2:

Matthew, a radiologic technologist and clinical instructor at a progressive hospital, requires his students to assist with special procedures. For these procedures, the students must be able to perform sterile technique. Before assigning them work in the sterile environment, he must make sure that each student can describe the rules of maintaining the integrity of a sterile field. Matthew must decide on the type of instrument he will use. He desires to use an instrument that is objective and easy to score. He would not like his students to guess at the answers. Which is the most appropriate instrument for Matthew to use?

Answer:

Since Matthew is assessing knowledge, a written examination would be appropriate. The most appropriate format would be multiple-choice, because he desires to use an instrument that is objective and easy to score. The true/false format would not be appropriate, because Matthew wants to reduce the chance of guessing. The short answer or essay formats would not be appropriate, because an objective assessment is desired.

Go on the the Self-Check for Learning Activity #4 to try your hand at selecting appropriate instruments for different clinical situations!

SELF-CHECK FOR LEARNING ACTIVITY #4

Directions: For the following clinical situation, determine the most appropriate instrument.

Clinical Situation:

Sally, a pharmacy technologist and clinical educator, has noticed one of her students repeatedly being rude to the pharmacy technologists and other students. She would like to use disciplinary action (in cooperation with her affiliate institution) to correct the behavior. She knows that a written evaluation of the actual behavior as it occurred is the only way to legally handle the matter.

Which assessment instrument should she use?

Why?

Check your answer!

SELF-CHECK ANSWER KEY

Answer:

Sally intends to assess an affective behavior through observation, so an observational instrument is needed. The most appropriate format would be the critical incident report, since Sally would like to document the behavior as it occurred, in order to initiate disciplinary action. (Take note that the critical incident report is used as a supplement to other assessment formats. The checklist or rating scale would be used in conjunction with the critical incident report, in order to evaluate both the affective and psychomotor behaviors of Sally's student.)

This concludes the Learning Activities of the module. If you feel confident in selecting appropriate assessment instruments, proceed to the Post-Test!

POST-TEST

Part I:

Matching: Match the instrument format on the left with the descriptions and uses on the right. Place the letter of the description or use on the line next to the corresponding format. All descriptions and uses are to be used only once.

1. _____ True/False
2. _____ Multiple-Choice
3. _____ Matching of Items
4. _____ Short-Answer
5. _____ Essay Question
6. _____ Checklist
7. _____ Rating Scale
8. _____ Anecdotal Records
9. _____ Critical Incident Report

A. May be sentence completion, fill-in-the-blank, or free response.

B. The observer notes if the student behavior is present or absent.

C. All levels of the cognitive domain can be assessed through this item, but it is a difficult item to construct.

D. The facts and interpretations of the behavior are reported separately.

E. Easy to construct and provides total objectivity in scoring.

F. Made up of "premises" and "responses."

G. Follows the "ABC rule."

H. The observer assesses the quality of the student's behavior numerically, graphically, or descriptively.

I. Gives students a chance to voice their opinion about a topic.

Part II:

10. Critique of an Instrument: For the following assessment instrument,* give a critique on the format and construction. You may use the rules and guidelines listed in Learning Activity #3 to aid in your critique.

Objective for the Unit: Given a simulated situation with a respiration manikin, give mouth-to-mouth resuscitation, following the guidelines stated in the first-aid manual.

Instrument:

Student's Name: _____ Student's Signature: _____

Evaluator's Name: _____ Evaluator's Signature: _____

Date of Evaluation: _____

Directions: Check the following behaviors as they occur.

_____ 1. Recognized unconsciousness

_____ 2. Called for help

_____ 3. Established an airway

_____ 4. Checked for breathlessness

_____ 5. Sympathized with patient

_____ 6. Tilted patient's head back

_____ 7. Sealed patient's nostrils closed with thumb and finger and made an air-tight seal over patient's mouth with his/her mouth

_____ 8. Blew four short breaths into the patient's mouth

_____ 9. Allowed patient to exhale passively

_____ 10. Repeated at a rate of 12 ventilations per minute

_____

* Adapted from Radiographer--a catalog of tasks, performance objectives, performance guides, tools and equipment, by V-TECS, Vocational-Technical Education Consortium, Athens, GA: University of Georgia, 1980.

Your Critique of the Instrument:

Step #1:

Step #2:

Part III:

Selection of an appropriate instrument: For each of the following clinical situations, determine the most appropriate instrument for the situation.

11. Clinical situation:

Margo, a respiratory therapist and clinical educator at a small cancer hospital, would like to test her new students on their knowledge of cancer and its emotional effects on patients. Since her students will be working closely with cancer patients, she would like to ask them their personal opinions about cancer patient care before they actually care for the patients at the hospital. Instead of asking them verbally, she would like to have them write their answer, so she could keep the document in their file for future reference.

What instrument should Margo use?

Why?

12. Clinical Situation:

Paul, a clinical instructor for a nurse assistant program at a progressive high school, must evaluate his students on their competence in patient instruction. He wants to make sure that his students correctly inform patients about proper hygiene. As requested by the high school coordinator, the evaluation must be as objective as possible. The coordinator is not necessarily interested in the level of performance; rather, she wants to know if the student is able to perform the task.

What instrument should Paul use?

Why?

Check your answers with the Post-Test Answer Key!

POST-TEST ANSWER KEY

Part I: Matching

1. E
2. C
3. F
4. A
5. I
6. B
7. H
8. D
9. G

Part II: Critique of an Instrument

10. Under general rules and guidelines:

    - Item #5 does not relate to an observable, measurable performance objective for the clinical education course. The observer would not be able to observe the student sympathizing with the patient.

    Under observational instruments rules and guidelines:

    - A space for the name of the institution where the observation took place was not included.

    Under checklist rules and guidelines:

    - Item #5 is not an observable and measurable behavior. One can not observe sympathy.
    - Item #8 contains more than one behavior.
    - No space is provided for comments.

Part III: Selection of an Appropriate Instrument

11. Margo wants to assess her students' knowledge on cancer patient care, therefore, she should use the written examination. Since she wants them to express their own opinion on the subject, the essay question would be the most appropriate.

12. Paul is wanting to assess a performance skill, so he should use an observational instrument. Since his high school coordinator requests that the evaluation assess only presence of performance instead of level of performance, and be as objective as possible, the most appropriate format would be the checklist.

If you missed more than 3 answers, you should review the Learning Activities in this module.

SUMMARY

You must evaluate your students on their performance competency in your health occupations field. To aid in the evaluation, you must use evaluation instruments, in order to make the evaluation standard for all students and to document the evaluation for permanent record. Many different types of instruments exist. They all have their own types of format and use. It is important that you are able to critique your instruments. It is also important that you are able to select the most appropriate instrument for all of your clinical situations. The quality and type of instrument you use will influence the success of your evaluation.

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